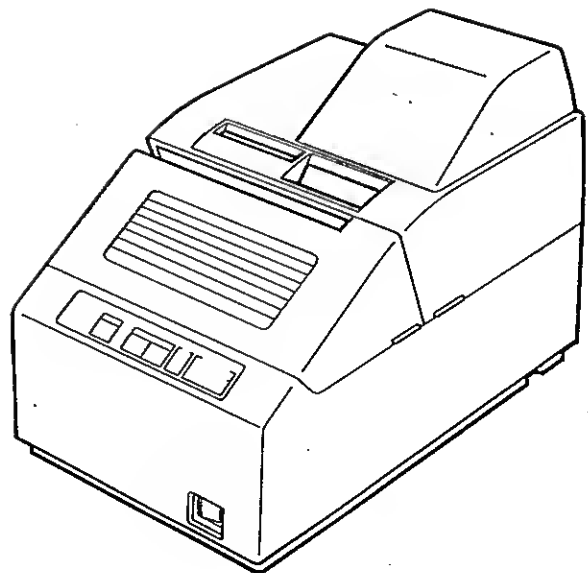


TEC

TEC Receipt/Journal Printer

DRJST-51

Owner's Manual



TOSHIBA TEC CORPORATION

DECLARATION OF CONFORMITY (for EU only)

Manufacturer : TOSHIBA TEC CORPORATION
Address : 570 Ohito, Ohito-cho, Tagata-gun,
Shizuoka-ken, Japan

declares, in sole responsibility, that the product

Product Name : Remote R/J Printer
Model Number : DRJST-51

conforms to the following standards under EMC Directive (89/336/EEC, 93/68/EEC) and Low Voltage Directive (73/23/EEC, 93/68/EEC) :

EMC : EN50082-1 (1992)
IEC801-2 (1991)
ENV50140 (1993)
IEC801-4 (1988)
EN55022 (1994) - Class A
LVD : EN60950 (1992) + A1 and A2

Supplementary Information :
The product was tested in a typical system configuration with a TEC POS terminal.

NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference as his own expense. Changes or modifications not expressly approved by manufacturer for compliance could void the user's authority to operate the equipment.

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Warnung

Dies ist ein Klasse A Produkt. In einer örtlichen Umgebung kann dieses Gerät Funkstörungen verursachen.

ATTENTION

Ce produit est de classe A. Dans un environnement domestique, il peut causer des interférences radio. Auquel cas, l'utilisateur sera amené à prendre les mesures adéquates.

Atención

Este es un producto de la clase A. En ambientes domésticos éste producto puede causar radio interferencias en cuyo caso el usuario deberá tomar las medidas oportunas.

VERWITTIGING

Dit is een klasse A produkt. Het gebruik hiervan kan radio interferenties veroorzaken die de gebruiker ertoe kunnen dwingen sommige maatregelen te moeten treffen.

Schallemission : 77.3 dB(A) nach DIN 45635 (ISO7779)

Safety Summary

Personal safety in handling or maintaining the equipment is extremely important. Warnings and Cautions necessary for safe handling are included in this manual. All warnings and cautions contained in this manual should be read and understood before handling or maintaining the equipment.

Do not attempt to effect repairs or modifications to this equipment. If a fault occurs that cannot be rectified using the procedures described in this manual, turn off the power, unplug the machine, then contact your authorized TOSHIBA TEC representative for assistance.

Meanings of Each Symbol



This symbol indicates warning items (including cautions). Specific warning contents are drawn inside the Δ symbol. (The symbol on the left indicates a general caution.)



This symbol indicates prohibited actions (prohibited items). Specific prohibited contents are drawn inside or near the \odot symbol. (The symbol on the left indicates "no disassembling".)



This symbol indicates actions which must be performed. Specific instructions are drawn inside or near the \bullet symbol. (The symbol on the left indicates "disconnect the power cord plug from the outlet".)



WARNING

This indicates that there is the risk of death or serious injury if the machines are improperly handled contrary to this indication.



Prohibited

■ Do not plug in or unplug the power cord plug with wet hands as this may cause electric shock.



Any other than the specified AC voltage is prohibited.

■ Do not use voltages other than the voltage (AC) specified on the rating plate, as this may cause fire or electric shock.



Prohibited

■ If the machines share the same outlet with any other electrical appliances which consume large amounts of power, the voltage will fluctuate widely each time these appliances operate. Be sure to provide an exclusive outlet for the machine as this may cause the machines to malfunction.



Prohibited

■ Do not place metal objects or water-filled containers such as flower vases, flower pots or mugs, etc. on top of the machines. If metal objects or spilled liquid enter the machines, this may cause fire or electric shock.



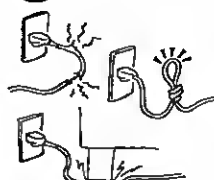
Prohibited

■ Do not insert or drop metal, flammable or other foreign objects into the machines through the ventilation slits, as this may cause fire or electric shock.



Prohibited

■ Do not scratch, damage or modify the power cords. Also, do not place heavy objects on, pull on, or excessively bend the cords, as this may cause fire or electric shock.



Disconnect the plug.




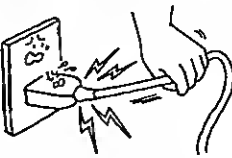

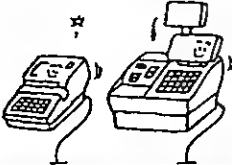


■ If the machines are dropped or their cabinets damaged, first turn off the power switches and disconnect the power cord plugs from the outlet, and then contact your authorized TOSHIBA TEC representative for assistance. Continued use of the machine in that condition may cause fire or electric shock.



Disconnect the plug.

■ Continued use of the machines in an abnormal condition such as when the machines are producing smoke or strange smells may cause fire or electric shock. In these cases, immediately turn off the power switches and disconnect the power cord plugs from the outlet. Then, contact your authorized TOSHIBA TEC representative for assistance.



 <p>Disconnect the plug.</p> 	<p>■ If foreign objects (metal fragments, water, liquids) enter the machines, first turn off the power switches and disconnect the power cord plugs from the outlet, and then contact your authorized TOSHIBA TEC representative for assistance. Continued use of the machine in that condition may cause fire or electric shock.</p>	 <p>Disconnect the plug.</p> 	<p>■ When unplugging the power cords, be sure to hold and pull on the plug portion. Pulling on the cord portion may cut or expose the internal wires and cause fire or electric shock.</p>
 <p>Connect a grounding wire.</p> 	<p>■ Ensure that the equipment is properly grounded. Extension cables should also be grounded. Fire or electric shock can occur on improperly grounded equipment.</p>	 <p>No disassembling.</p> 	<p>■ Do not remove covers, repair or modify the machine by yourself. You may be injured by high voltage, very hot parts or sharp edges inside the machine. Unauthorized modification is prohibited.</p>



CAUTION

This indicates that there is the risk of personal **Injury** or **damage** to objects if the machines are improperly handled contrary to this indication.

Precaution

The following precautions will help to ensure that this machine will continue to function correctly.

- Try to avoid locations that have the following adverse conditions:
 - * Temperatures out of the specification
 - * Direct sunlight
 - * High humidity
 - * Shared power socket
 - * Excessive vibration
 - * Dust/Gas
- Do not subject the machine to sudden shocks.
- Do not press the keys too hard. Keys will operate correctly if they are touched lightly.
- Clean the cover and keyboard, etc. by wiping with a dry cloth or a cloth soaked with detergent and wrung out thoroughly. Never use thinner or other volatile solvent for cleaning.
- At the end of the day, turn the power OFF, then clean and inspect the exterior of the machine.
- Try to avoid using this equipment on the same power supply as high voltage equipment or equipment likely to cause mains interference.
- USE ONLY TOSHIBA TEC SPECIFIED consumables.
- DO NOT STORE the consumables where they might be exposed to direct sunlight, high temperatures, high humidity, dust, or gas.
- When moving the machine, take hold of the drawer and lift the machine.
- Do not place heavy objects on top of the machines, as these items may become unbalanced and fall causing injury.
- Do not block the ventilation slits of the machines, as this will cause heat to build up inside the machines and may cause fire.
- Do not lean against the machine. It may fall on you and could cause injury.

Request Regarding Maintenance

- Utilize our maintenance services.

After purchasing the machines, contact your authorized TOSHIBA TEC representative for assistance once per year or so to have the inside of the machines cleaned. Otherwise, dust will build up inside the machines and may cause fire or malfunction. Cleaning is particularly effective before humid rainy seasons.

- Our maintenance service performs the periodic checks and other work required to maintain the quality and performance of the machines, preventing accidents beforehand.

For details, please consult your authorized TOSHIBA TEC representative for assistance.

- Using insecticides and other chemicals

Do not expose the machines to insecticides or other volatile solvents, as this will deteriorate the cabinet or other parts or cause the paint to peel.

TABLE OF CONTENTS

	Page
1. INTRODUCTION	1
1.1 Applicable Model	1
2. APPEARANCE AND NOMENCLATURE	2
3. OPERATION PANEL	3
4. INSTALLING THE PRINTER	4
4.1 Parallel Interface Type	4
4.2 Serial Interface Type	5
5. HANDLING OF THE PRINTER	6
6. SPECIFICATIONS	13
6.1 Printer Unit	13
6.2 Ink Ribbon	13

1. INTRODUCTION

Thank you for purchasing the TEC DRJST-51 Receipt/Journal Printer. This printer is a high-speed dot matrix printer. The interface complies with the 8-bit parallel interface (conforming to Centronics interface) or Serial interface (conforming to RS-232C), which enables connection with various devices.

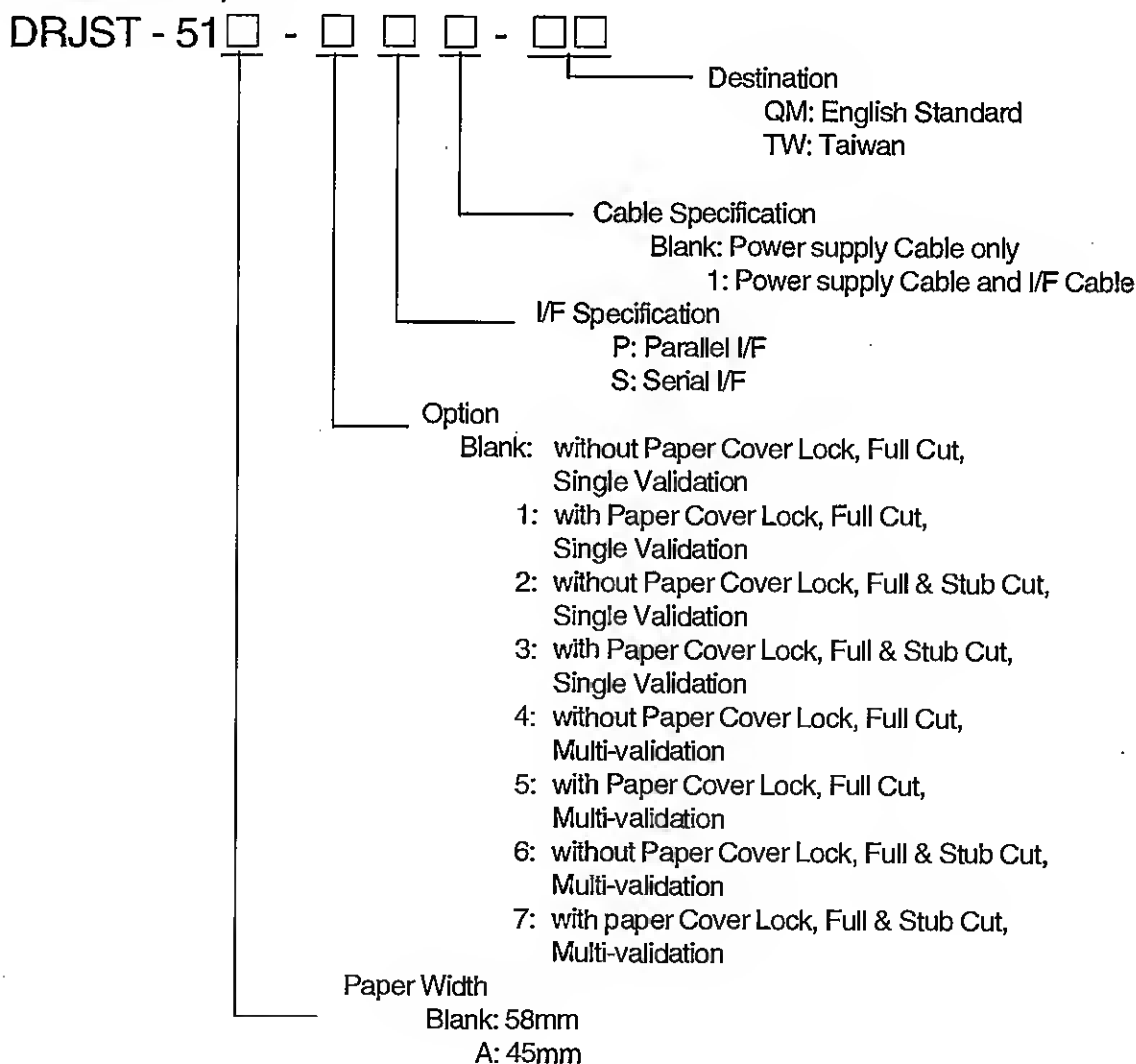
This printer contains three stations; receipt, journal and slip. Up to 40 digits can be printed on the receipt and journal, and up to 88 digits on the slip for the 58-mm wide; And up to 24 digits can be printed on the receipt and journal, and up to 55 digits on the slip for the 45-mm wide.

This manual describes the functions and handling of this Printer and should be read carefully to help gain maximum performance and life from your Printer. For most queries please refer to this manual and keep it safe for future reference.

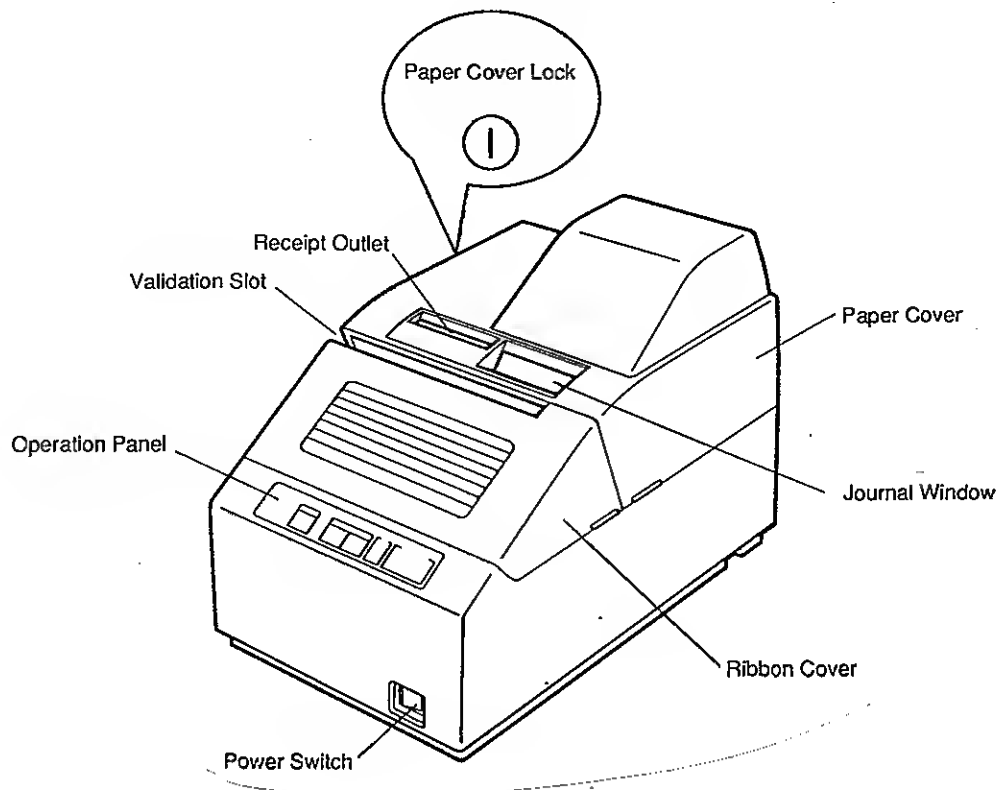
1.1 Applicable Model

· DRJST-51 SERIES

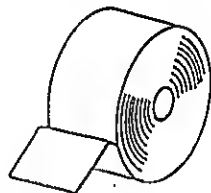
Model name description



2. APPEARANCE AND NOMENCLATURE



Accessory Parts



Paper Roll (2 pcs.)
58 mm x ø 50 mm
or
45 mm x ø 50 mm



Stamp Ink (1 pc.)



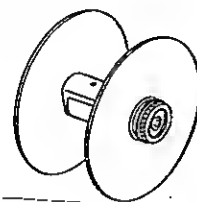
Paper Cover Lock Keys (2 pcs.)
(with Paper Cover Lock model only)



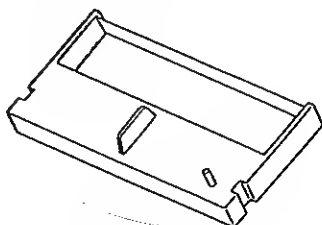
Cable Clamp (1pc.)



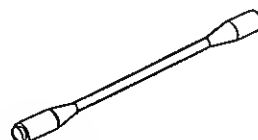
Double Sems Screw M 3x8 (1pc.)



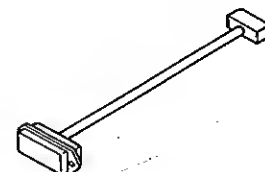
Journal Take-up Reel (1pc.)



Ribbon Cassette (1 pc.)

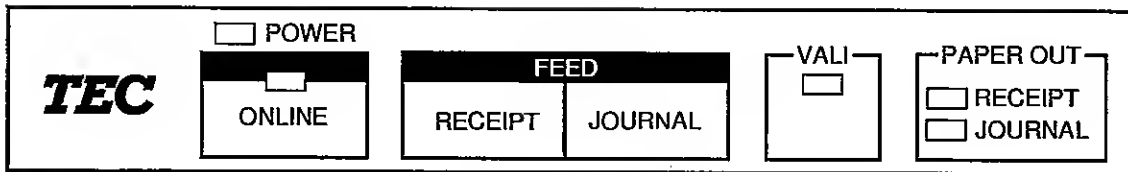


Printer Power Cable (1 pc.)



Parallel or Serial I/F Cable
(Option ; 1 pc.)

3. OPERATION PANEL



POWER LED: Green
Lights: Power On
Not lights: Power off

ON LINE LED: Green
Lights: Online
Not lights: Offline
Blinks: Mechanical error detected

ON LINE Switch

This switch selects online or offline.

When the printer is in an online state, printing can be done in usual mode. When offline is selected, the printer stops printing after printing the line currently being printed.

RECEIPT FEED Switch

This switch feeds the receipt.

This switch is effective only when the ONLINE LED does not light (offline mode). Even if this switch is pressed while the ONLINE LED lights, the receipt is not fed.

When this key is pressed within the set time (Note 1) after validation paper is loaded on the multi-validation model, validation printing is started.

JOURNAL FEED Switch

This switch feeds the journal.

This switch is effective only when the ONLINE LED does not light (offline mode). Even if this switch is pressed while the ONLINE LED lights, the journal is not fed.

When this key is pressed within the set time (Note 1) after validation paper is loaded on the multi-validation model, validation printing is started.

VALI LED: Green

Lights: Validation mode
Not lights: Receipt/journal mode
Blinks: Waiting for Validation paper

RECEIPT OUT LED: Red

When receipt paper almost runs out, the red LED lights. This LED does not light in usual states.

JOURNAL OUT LED: Red

When journal paper almost runs out, the red LED lights. This LED does not light in usual states.

Note 1: The set time indicates the time until printing is started automatically after the validation is detected. It can be set from the host side. When no entry is made, it is set to 2 seconds.

4. INSTALLING THE PRINTER

Connecting the Printer Cable and Power Cable

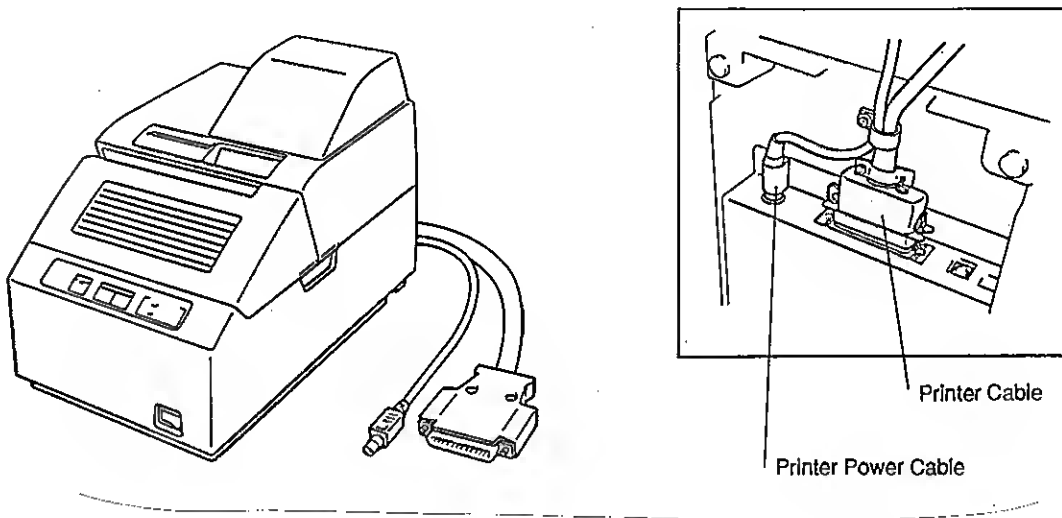
WARNING!

Turn the **POWER SWITCH** to **OFF** of **ENGINE Box** before connecting the power cord or cables.

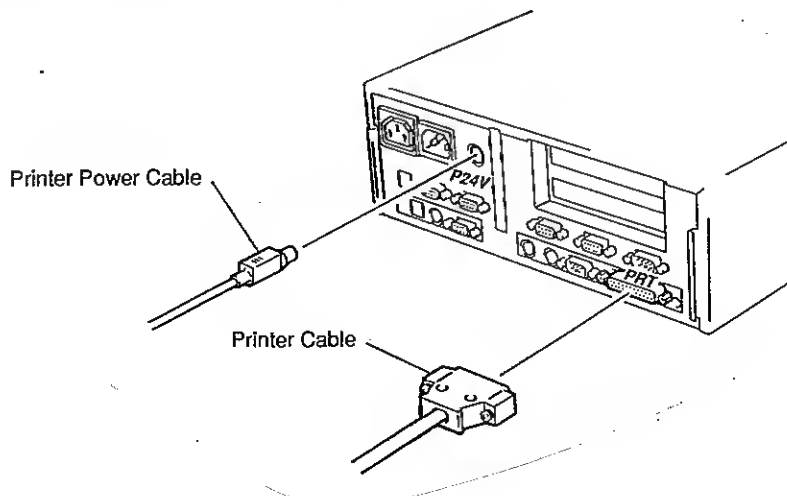
Follow these steps to connect the printer to the TEC POS Terminal ST-5500 Series.

4.1. Parallel Interface Type

- 1) Connect the printer cable and printer power cable to the printer. The cables are secured with the attached cable clamp as shows below.

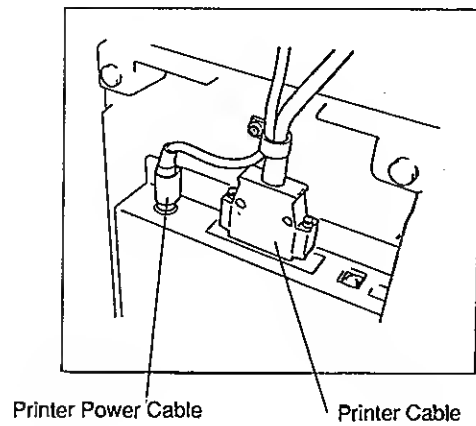
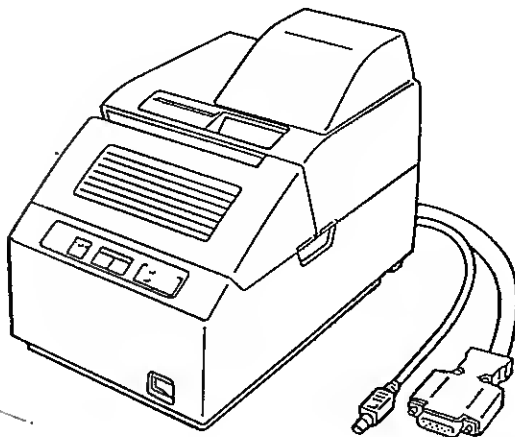


- 2) Connect the printer cable and the power cable of the R/J Printer to **PRT** and **P24V** of the **ENGINE Box**, respectively.

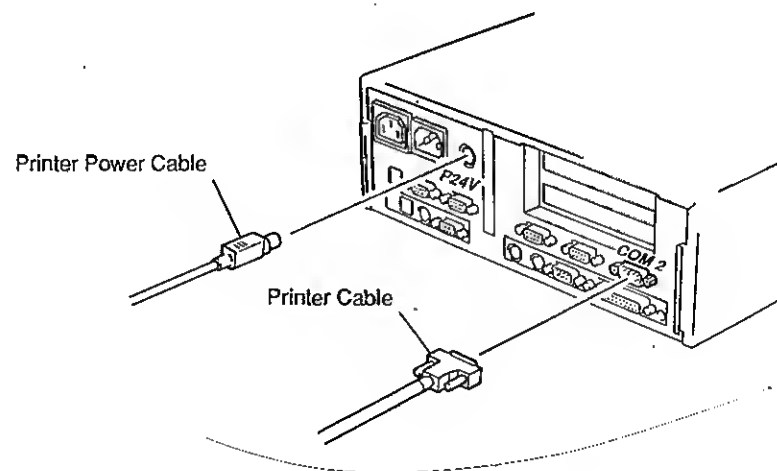


4.2. Serial Interface Type

- 1) Connect the printer cable and printer power cable to the printer. The printer cables are secured with the attached cable clamp as shows below.



- 2) Connect the printer cable and the power cable of the R/J Printer to **COM2** and **P24V** of the ENGINE Box, respectively.



5. HANDLING OF THE PRINTER

• Removing the paper cover

Remove the paper cover when the receipt or journal paper roll is replaced with a new one or when the store name/message stamp ink must be replenished.

1. Removing the paper cover

- 1) For the model equipped with the paper cover lock, insert the cover lock key into the cover lock and turn it 90 degrees to the frontward to open the lock (Fig. 1).

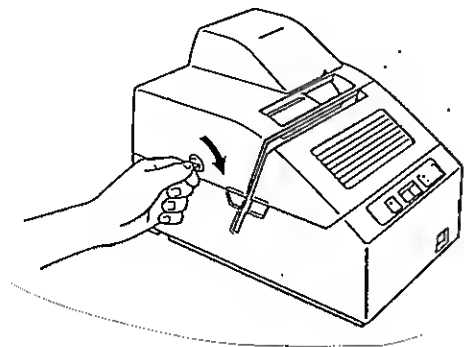


Fig. 1

- 2) Remove the paper cover by lifting up on both edges of the paper cover (Fig. 2).

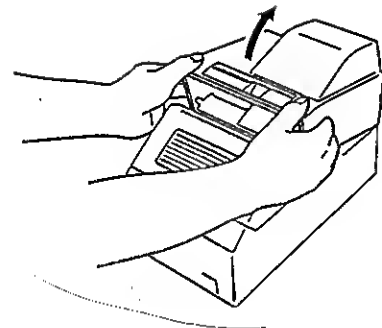


Fig. 2

2. Attaching the paper cover (Fig. 3)

- 1) Mate the hooks on the rear of the paper cover with the notches in the top cover.
- 2) Push down the front side as it clicks, and lock the paper cover with the key.

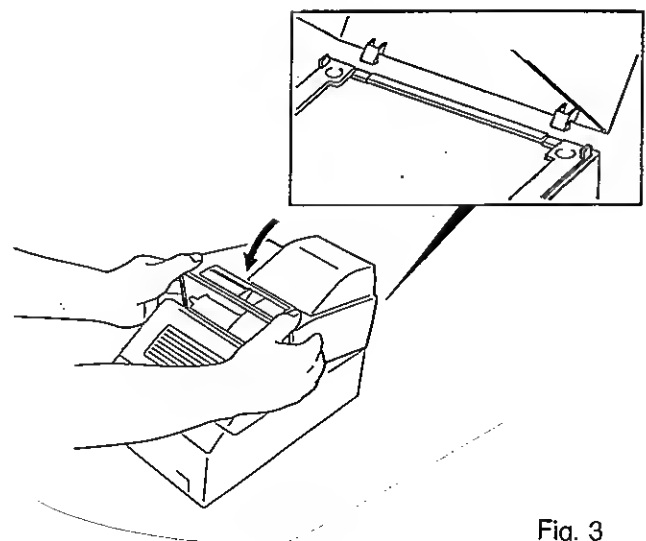


Fig. 3

• Removing the ribbon cover

Remove the ribbon cover when the ribbon cassette must be replaced.

1. Remove the ribbon cover

- 1) Remove the paper cover. (Refer to the "Remove the paper cover".)
- 2) Remove the ribbon cover by lifting up on both edges of the ribbon cover. (Fig. 1)

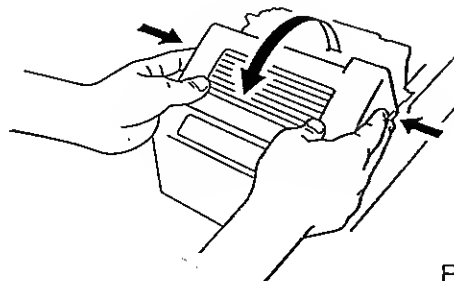


Fig. 1

2. Attaching the ribbon cover (Fig. 2)

- 1) Make the claws on the front of the ribbon cover with the holes in the top cover.
- 2) Push down the rear side as it clicks.

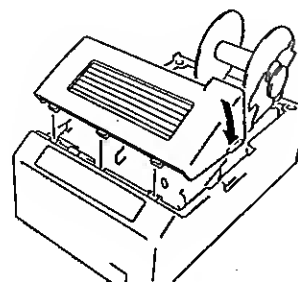


Fig. 2

• Installing the receipt roll

- 1) Removing the paper cover. (Refer to the "Removing the paper cover".)
- 2) Cut the paper end to make it sharp. (Fig. 1)

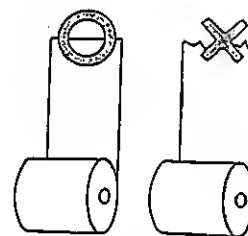


Fig. 1

- 3) Place the paper end on the left holder so that paper will be fed from the bottom of the paper roll. (Fig. 2)

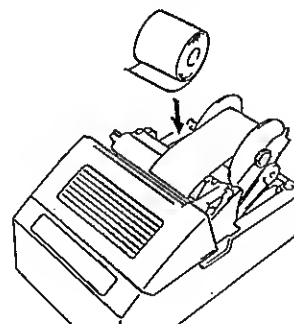


Fig. 2

- 4) Insert the paper end into the paper inlet until it stops, then feed the paper by pressing the RECEIPT FEED Switch. (Fig. 3)

Note: When paper is inserted into the paper inlet of the printer for Taiwan, the paper is automatically fed and cut. Remove the cut paper.

- 5) Attaching the paper cover with the paper end coming out of the receipt outlet. (Refer to the "Attaching the paper cover".)

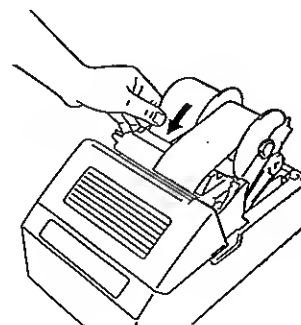


Fig. 3

• Installing the journal roll

- 1) Follow Steps 1) and 2) for "Installing the receipt roll" in the preceding section.
- 2) Place the paper end on the right holder so that paper will be fed from the bottom of the paper roll. (Fig. 1)

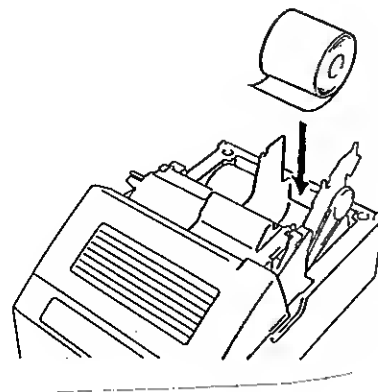


Fig. 1

- 3) Insert the paper end into the paper inlet until it stops, then feed the paper by pressing the JOURNAL FEED Switch until the leading edge of the paper comes out about 25 cm. (Fig. 2)

Note: When paper is inserted into the printer for Taiwan, the paper is automatically fed.

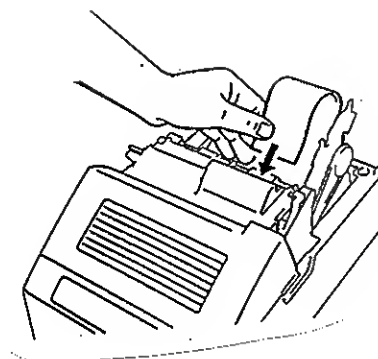


Fig. 2

- 4) Insert the paper end into the slit on the take-up Reel and wind it around the reel two or three turns. (Fig.3)
Place the take-up reel on the take-up holder. (Fig. 4)

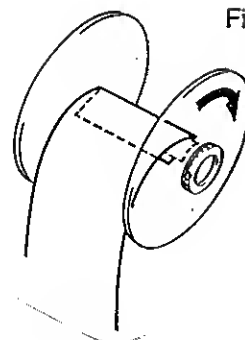


Fig. 3

- 5) Push the take-up reel rearward until slack in paper is eliminated.
- 6) Attaching the paper cover. (Refer to the "Attaching the paper cover".)

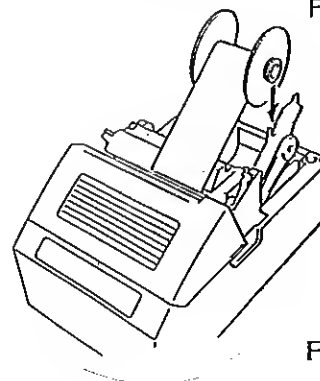


Fig. 4

- **Setting the ribbon cassette**

- 1) Removing the paper cover and the ribbon cover. (Refer to the "Removing the paper cover" and the "Removing the ribbon cover.")
- 2) Push down the ribbon cassette as it clicks. (Fig. 1)

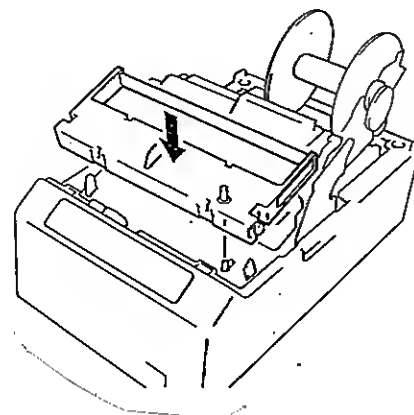


Fig. 1

- 3) Turn the knob of the ribbon cassette in the arrow direction several times to remove the slack on the ribbon. (Fig. 2)

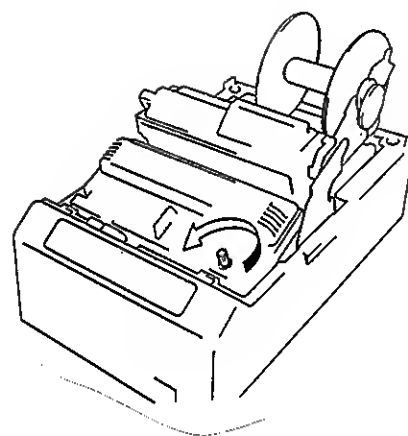


Fig. 2

- 4) Attach the ribbon cover and the paper cover. (Refer to the "Attaching the ribbon cover" and the "Attaching the paper cover.")

• Replacing the receipt roll

- 1) Removing the paper cover. (Refer to the "Removing the paper cover".)
- 2) Lift the green lever on the receipt side. (Fig. 1)

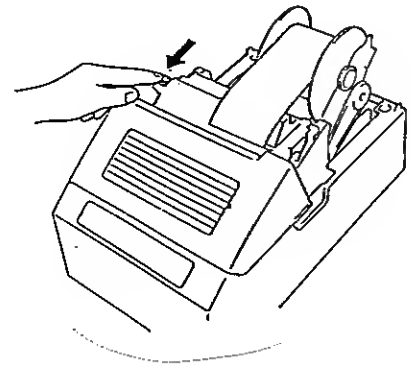


Fig. 1

- 3) Remove the remaining paper roll from the rear side of the printer. (Fig. 2)

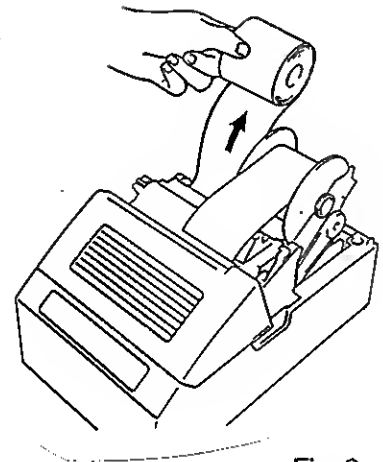


Fig. 2

- 4) Lower the green lever. (Fig. 3)
- 5) Install a new paper roll according to steps 2) to 5) of the procedure "Installing the receipt roll".

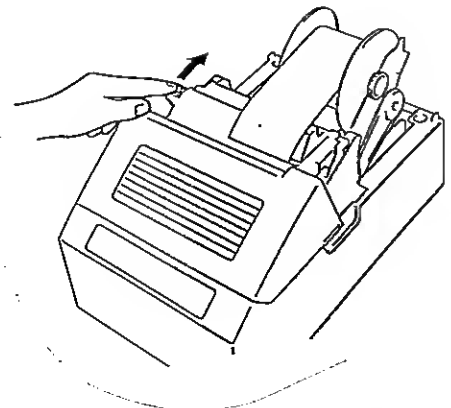


Fig. 3

• Replacing the journal roll

- 1) Removing the paper cover. (Refer to the "Removing the paper cover".)
- 2) Cut the journal paper as shown in the figure. (Fig. 1)

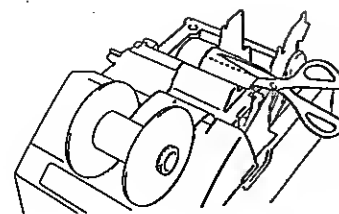


Fig. 1

- 3) Lift the green lever on the journal side. Lift the take-up reel to remove paper. (Fig. 2)

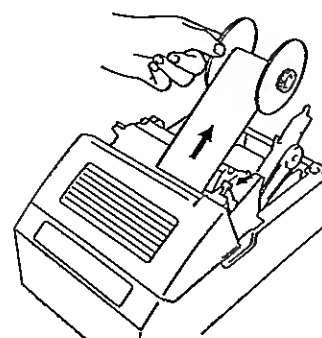


Fig. 2

- 4) Lower the green lever. (Fig. 3)
- 5) Install a new paper roll according to steps 1) to 6) of the procedure "Installing the journal roll".

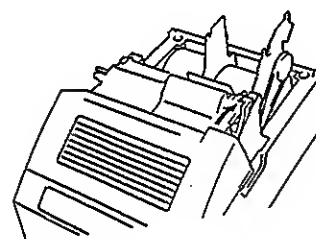


Fig. 3

• Replacing the ribbon cassette

- 1) Removing the paper cover and the ribbon cover. (Refer to the "Removing the paper cover" and the "Removing the ribbon cover".)
- 2) Removing the old ribbon cassette by pulling it upward. (Fig. 1)
- 3) Set a new ribbon cassette according to steps 2) to 4) of the procedure "Setting the ribbon cassette."

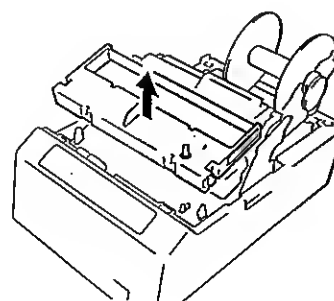


Fig. 1

- **Replenishing the ink to the store name/message stamp**

When the store name/message stamp, if installed, printing appears too dim, replenish the ink in the following procedure.

- 1) Remove the paper cover. (Refer to the "Remove the paper cover".)
- 2) Remove the store name/message stamp by pulling it in the figure. (Fig. 1)

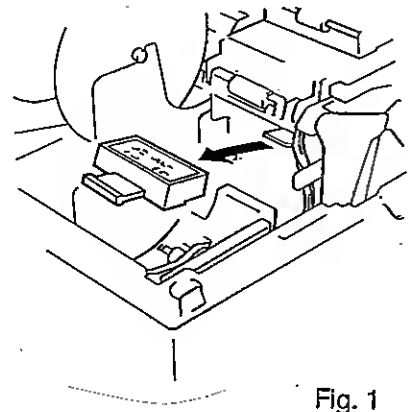


Fig. 1

- 3) Apply ink only two or three drops.
Stamp may not print dark immediately.
Allow time for ink to saturate the stamp.
(Fig. 2)

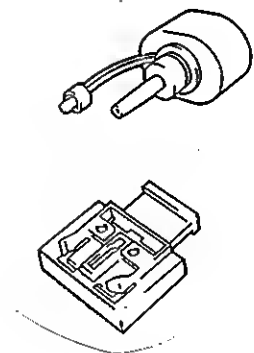


Fig. 2

- 4) Install the stamp by inserting it in the direction of the arrow mark as it clicks.
(Fig. 3)

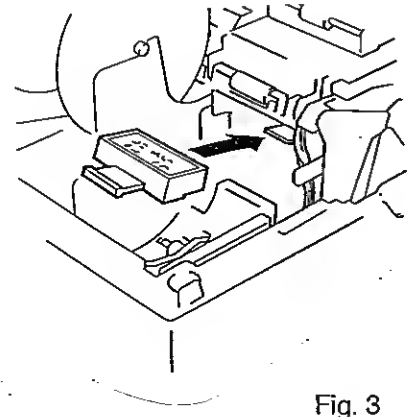


Fig. 3

6. SPECIFICATIONS

6.1. Printer Unit

Item	Description		
Printing Type	Impact Dot Matrix Printing		
Printable Digits		DRJST-51	DRJST-51A
	Receipt/Journal Validation Slip	40/40 digits 88 digits	24/24 digits 55 digits
Font Components	Regular-sized Character :7 (W) x 9 (H) dots Double-width Character :17 (W) x 9 (H) dots		
Character size (Unit: mm)		DRJST-51	DRJST-51A
	Regular-sized Double-width	0.81 (W) x 2.82 (H) 2.17 (W) x 2.82 (H)	1.04 (W) x 2.82 (H) 2.77 (W) x 2.82 (H)
Kinds of Fonts	Alphanumeric: 95 characters Katakana/Hiragana: 64 characters each Kanji: 235 characters Kanji (Chinese): 135 characters Extended graphics: 128 characters International char.: 32 characters		
Print Speed	Approx. 2.6 line/s (DRJST-51) Approx. 4.0 line/s (DRJST-51A)		
Receipt Cut	Full cut (standard)		
Roll Paper Size	45/58 +0.1 -0.5mm (W) x ø Max. 80 mm / Thickness: 0.07 to 0.09 mm		
Validation Slip	Normal paper + carbon paper or pressure sensitive paper Up to 3 duplicate sheets (including the original) Single Sheet Thickness : 0.07 to 0.14 mm Total Thickness : 0.2 mm max. Size Portrait: 135 to 210 (W) x 77 to 135 (H) mm Landscape: 70 to 135 (W) x 135 to 210 (H) mm Maximum number of printed lines: 11 (multi-validation)		
External Dimensions	190 mm (W) x 300 mm (D) x 219 mm (H) (including the rubber feet)		
Weight	4.0 kg		
Interface with the control Unit	8-bit parallel interface (conforming to Centronics) or Serial interface (conforming to RS-232C)		
Interface Cable Length	2 m (option)		
Power Required	DC 24V (supplied by the Control Unit or Adapter)		
Power Consumed	2.0A		
Environmental Conditions	0°C to 35°C / 10% to 90% RH (non-condensing)		

6.2. Ink Ribbon

Item	Description
Ribbon type	Ribbon cassette
Dimension	Ribbon: 13 mm (W) x 6 m (L)
Material & Color	Nylon, Purple
Life	Approx. 6 million characters

